

Update on $W/Z \rightarrow$ dijets

QCD Meeting

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Note 4191

- Used JTC96 for jet corrections
- Used single jet trigger efficiency to find Efficiency vs dijet mass
- Used following kinematic cuts
 - $0.1 < |\eta| < 0.9$
 - Third jet $E_T < 12 \text{ GeV}$
 - $\Delta\Phi_{jj} > 160^\circ$
 - Jet electromagnetic energy fraction < 0.95

This analysis

- Used jet corrections based on new energy scale of CHA
- Used background fit extrapolated to low dijet mass values to find Efficiency vs dijet mass
- Used following kinematic cuts
 - Third jet $E_T < 10 \text{ GeV}$
 - $\Delta\Phi_{jj} > 113^\circ$

Comparing 4191 and this analysis

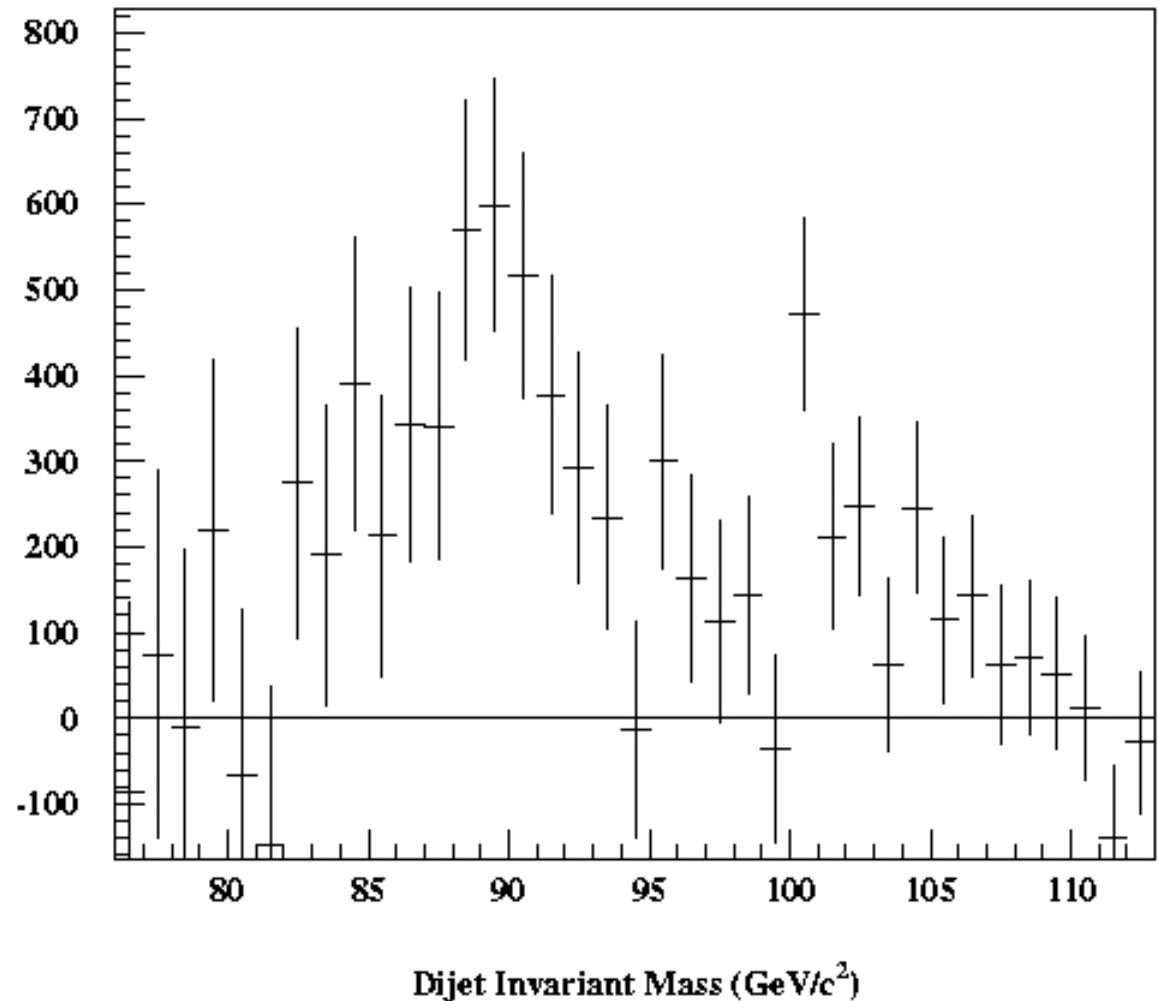
	4191	This Analysis
Jet Corrections	JTC96	Corrections based on new CHA energy scale
Trigger Correction	Based on single jet efficiency	Based on fit to high dijet mass region
Kinematic Cuts	<ul style="list-style-type: none">• $0.1 < \eta < 0.9$• Third jet $E_T < 12$ GeV• $\Delta\Phi_{jj} > 160^\circ$• Jet em energy fraction < 0.95	<ul style="list-style-type: none">• Third jet $E_T < 10$ GeV• $\Delta\Phi_{jj} > 113^\circ$

Results

- JTC96, our kinematic cuts, our trigger efficiency method
 - Results: 4391 ± 2334 (sys) ± 720 (stat)
 - Signal found in region 82-107 GeV/c²
- JTC96, 4191 kinematic cuts, our trigger efficiency method
 - Results: 610 ± 899 (sys) ± 406 (stat)
 - Looked in region 82-107 GeV/c²

Residuals


- JTC96
- our kinematic cuts
- our trigger efficiency method



Acceptances


- $0.1 < |\eta| < 0.9$
- Third jet $E_T < 12 \text{ GeV}$
- $\Delta\Phi_{jj} > 160^\circ$
- Jet 1,2 $E_T > 12 \text{ GeV}$

From
Note
4191



	PYTHIA + QFL	PYTHIA generated values
W	10 %	3%
Z	13 %	3%

To Do

- Generate W's and Z's with PYTHIA and run them through QFL  Already started
 - resolve discrepancy in acceptances
- Find the trigger efficiency using single jet trigger efficiency (as in Note 4191)
- Use Note 4191 kinematic cuts with our jet corrections, our trigger efficiency correction